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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,185	12/18/2000	Takayuki Araki	P06971US00/L	2588
881	7590	10/19/2004	EXAMINER	
STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			RUTHKOSKY, MARK	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,185

Applicant(s)

ARAKI ET AL.

Examiner

Mark Ruthkosky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-44 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

ELECTION/RESTRICTION

Response to Appeal Brief

In view of the Appeal Brief filed on 7/15/2004, PROSECUTION IS HEREBY REOPENED. A restriction requirement, which will be followed by a new, non-final rejection, is set forth below.

Based on the applicant's arguments in the appeal brief, it is clear to the examiner that the claims are indefinite with regard to the overlap between monomer structures in the claimed segments of the various polymers present in the application and that prosecution of the application should be reopened to clarify these structures in the claims. As the claims include structures with different features, which are patentably distinct, as noted below, restriction of the claims including elections of species for the different segments and formulae are required for a thorough examination.

Restriction

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-16 and 37, drawn to a material for a solid polyelectrolyte and a solid polyelectrolyte membrane.

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Group II, claim(s) 17-21 and 41, drawn to a multi-segmented fluoropolymer having a first segment containing sulfuric acid functional groups and a second segment containing no sulfuric acid functional groups.

Group III, claim(s) 22-29 and 42-44, drawn to a multi-segmented fluoropolymer having a first segment containing sulfuric acid functional groups and a second segment containing sulfuric acid functional groups.

Group IV, claim(s) 30-36 and 38-40, drawn to a material for a solid polyelectrolyte and a solid polyelectrolyte membrane, each having a multi-segmented, block copolymer, fluoropolymer.

The inventions listed as Groups I and IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

All of the groupings are directed to a multi-segmented fluoropolymer but each group has a special technical feature not shared by the remaining groups.

Group I is directed to *material for a solid polyelectrolyte and a solid polyelectrolyte membrane* which has the special technical feature of a multi-segmented fluoropolymer having a first segment of formula (1) containing sulfuric acid functional groups copolymerized with a unit having no sulfonic acid groups, and a second segment B containing no sulfuric acid functional groups, having a crystalline melting point of 100C or higher or a glass transition temperature point of 100 C or higher.

Group II is directed *a multi-segmented fluoropolymer* which has the special technical feature of a multi-segmented fluoropolymer having a first segment containing sulfuric acid functional groups which is a copolymer having a molecular weight of 5,000-750,000 and a unit having no sulfonic acid groups, and a second segment B containing no sulfuric acid functional groups, having a molecular weight of 3,000-12,000,000.

Group III is directed *a multi-segmented fluoropolymer* which has the special technical feature of a multi-segmented fluoropolymer having both a first segment containing sulfuric acid functional groups and a second segment B containing sulfuric acid functional groups.

Group IV is directed to *material for a solid polyelectrolyte and a solid polyelectrolyte membrane* which has the special technical feature of a block copolymer having at least two types of fluoropolymer chain segments at least one chain segment containing sulfuric acid functional groups.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1. For the group selected in the restriction requirement there are more than one species of the generic invention.

The species are as follows:

In Group I, formula (1) shown in claims 1 and 11 includes a combination of elements in the monomer molecule. Specifically, n can be 0 or 1. This is combined with Rf, which is C1-C40 or C1-C40 having an ether bond and offers combinations of the four different species. The applicant should elect one of the combination species. In claim 6, the concentration of each material, tetrafluoroethylene and Formula (3), includes no amount or, 0 mol. %, of Formula 3. The applicant should elect the species with Formula (3) or with no amount or, 0 mol. %, of Formula (3).

In Group II, formula (1) shown in claims 17 and 41 includes a combination of elements in the monomer molecule. Specifically, n can be 0 or 1. This is combined with Rf, which is C1-C40 or C1-C40 having an ether bond and offers combinations of the four different species. The applicant should elect one of the combination species. In claim 18, the identity of Rf, is C1-C40 or C1-C40 having an ether bond. The applicant should elect one of the species. In claim 21, the concentration of each material, tetrafluoroethylene and Formula (3), includes no amount or, 0 mol. %, of Formula 3. The applicant should elect the species with Formula (3) or with no amount or, 0 mol. %, of Formula (3).

In Group III, formula (1) shown in claims 22 and 42 includes a combination of elements in the monomer molecule. Specifically, n can be 0 or 1. This is combined with R_f , which is C1-C40 or C1-C40 having an ether bond and offers combinations of the four different species. The applicant should elect one of the combination species. In claims 23 and 26, the identity of R_f is C1-C40 or C1-C40 having an ether bond. The applicant should elect one of the species.

In Group IV, formula (1) shown in claim 33 includes a combination of elements in the monomer molecule. Specifically, n can be 0 or 1. This is combined with R_f , which is C1-C40 or C1-C40 having an ether bond and offers combinations of the four different species. The applicant should elect one of the combination species. In claim 35, the identity of R_f is C1-C40 or C1-C40 having an ether bond. The applicant should elect one of the species.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

Group I, claim(s) 1-16 and 37.

Group II, claim(s) 17-21 and 41.

Group III, claim(s) 22-29 and 42-44.

Group IV, claim(s) 30-36 and 38-40.

The following claim(s) are generic: None.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Pursuant to PCT Rule 13.2 and PCT Administrative Instructions, Annex B, Part 1(f)(I)(B)(2), the species are not recognized equivalents.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The

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examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Ruthkosky

Primary Patent Examiner

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Mark Ruthkosky
10/7/04